

WHAT IS CLAIMED IS:

1. An apparatus for converting data signals, comprising:
an input operable to:

receive a plurality of data signals from a first interface converter
paddle associated with a first communication protocol; and

receive a plurality of data signals from a second interface converter
paddle associated with a second communication protocol; and

a serdes coupled to the input and operable to:

determine whether a coupled interface converter paddle coupled to the
serdes comprises the first interface converter paddle or the second interface converter
paddle;

identify the communication protocol associated with the coupled
interface converter paddle;

receive a plurality of data signals from the coupled interface converter
paddle, the data signals being serialized; and

deserialize the data signals according to the identified communication
protocol.

2. The apparatus of Claim 1, wherein the serdes is operable to:

receive a plurality of outgoing data signals from a line card; and

serialize the outgoing data signals according to the identified communication
protocol.

3. The apparatus of Claim 1, wherein the coupled interface converter

paddle comprises a transceiver operable to:

transform the data signals from an optical form to an electrical form;

transmit the data signals to the serdes;

receive a plurality of outgoing data signals from the serdes; and

transform the outgoing data signals from an electrical form to an optical form.

4. The apparatus of Claim 1, wherein the coupled interface converter paddle comprises a transceiver operable to:

transmit the data signals to the serdes, the data signals comprising a plurality of electrical signals; and

5 receive a plurality of outgoing data signals from the serdes, the outgoing data signals comprising a plurality of electrical signals.

5. The apparatus of Claim 1, wherein the coupled interface converter paddle comprises a high speed coupler operable to be hot-plugged to the serdes.

10

6. The apparatus of Claim 1, wherein the serdes is operable to adjust a speed of the data signals to a generic speed.

7. The apparatus of Claim 1, further comprising a board surface controller coupled to the serdes and operable to:

15

determine the identified communication protocol; and

instruct the serdes to process the data signals according to the identified communication protocol.

8. The apparatus of Claim 1, further comprising a status indicator operable to indicate a status of the data signals.

20

9. The apparatus of Claim 1, wherein the serdes is operable to transmit the data signals to a line card, the serdes disposed outwardly from the line card.

10. A system for converting data signals, comprising:

a first interface converter paddle associated with a first communication protocol;

5 a second interface converter paddle associated with a second communication protocol; and

a physical layer card operable to:

determine whether a coupled interface converter paddle coupled to the physical layer card comprises the first interface converter paddle or the second interface converter paddle;

10 identify the communication protocol associated with the coupled interface converter paddle;

receive a plurality of data signals from the coupled interface converter paddle, the data signals being serialized; and

15 deserialize the data signals according to the identified communication protocol.

11. The system of Claim 10, wherein the physical layer card is operable to:

receive a plurality of outgoing data signals from a line card; and

20 serialize the outgoing data signals according to the identified communication protocol.

12. The system of Claim 10, wherein the coupled interface converter paddle comprises a transceiver operable to:

transform the data signals from an optical form to an electrical form;

25 transmit the data signals to the physical layer card;

receive a plurality of outgoing data signals from the physical layer card; and

transform the outgoing data signals from an electrical form to an optical form.

13. The system of Claim 10, wherein the coupled interface converter paddle comprises a transceiver operable to:

transmit the data signals to the serdes, the data signals comprising a plurality of electrical signals; and

5 receive a plurality of outgoing data signals from the serdes, the outgoing data signals comprising a plurality of electrical signals.

14. The system of Claim 10, wherein the coupled interface converter paddle comprises a high speed coupler operable to be hot-plugged to the serdes.

15. The system of Claim 10, wherein the physical layer card is operable to adjust a speed of the data signals to a generic speed.

16. The system of Claim 10, further comprising a line card comprising a board surface controller operable to:

determine the identified communication protocol; and

instruct the physical layer card to process the data signals according to the identified communication protocol.

17. The system of Claim 10, further comprising a status indicator operable to indicate a status of the data signals.

18. The system of Claim 10, wherein the physical layer card is operable to transmit the data signals to a line card, the physical layer card disposed outwardly from the line card.

19. A method for converting data signals, comprising:

determining whether a coupled interface converter paddle coupled to a serdes comprises a first interface converter paddle or a second interface converter paddle, the first interface converter paddle associated with a first communication protocol, the
5 second interface converter paddle associated with a second communication protocol;

identifying the communication protocol associated with the coupled interface converter paddle;

receiving a plurality of data signals from the coupled interface converter paddle; and

10 deserializing the data signals according to the identified communication protocol.

20. The method of Claim 19, further comprising:

receiving a plurality of outgoing data signals from a line card; and

15 serializing the outgoing data signals according to the identified communication protocol.

21. The method of Claim 19, further comprising:

transforming the data signals from an optical form to an electrical form;

20 transmitting the data signals to the serdes;

receiving a plurality of outgoing data signals from the serdes; and

transforming the outgoing data signals from an electrical form to an optical form.

22. The method of Claim 19, further comprising:

25 transmitting the data signals to the serdes, the data signals comprising a plurality of electrical signals; and

receiving a plurality of outgoing data signals from the serdes, the outgoing data signals comprising a plurality of electrical signals.

30 23. The method of Claim 19, further comprising hot-plugging a high speed coupler of the coupled interface converter paddle to the serdes.

24. The method of Claim 19, further comprising adjusting a speed of the data signals to a generic speed.

5 25. The method of Claim 19, further comprising:
 determining the identified communication protocol using a board surface controller; and
 transmitting an instruction from the board surface controller to the serdes to process the data signals according to the identified communication protocol.

10 26. The method of Claim 19, further comprising indicating a status of the data signals.

15 27. The method of Claim 19, further comprising transmitting the data signals to a line card, the serdes disposed outwardly from the line card.

28. Logic for converting data signals, the logic embodied in a computer-readable medium and operable to:

determine whether a coupled interface converter paddle coupled to a serdes comprises a first interface converter paddle or a second interface converter paddle, the
5 first interface converter paddle associated with a first communication protocol, the second interface converter paddle associated with a second communication protocol;

identify the communication protocol associated with the coupled interface converter paddle;

receive a plurality of data signals from the coupled interface converter paddle;
10 and

deserialize the data signals according to the identified communication protocol.

29. The logic of Claim 28, wherein the logic is further operable to:

15 receive a plurality of outgoing data signals from a line card; and

serialize the outgoing data signals according to the identified communication protocol.

30. The logic of Claim 28, wherein the logic is further operable to:

20 transform the data signals from an optical form to an electrical form;

transmit the data signals to the serdes;

receive a plurality of outgoing data signals from the serdes; and

transform the outgoing data signals from an electrical form to an optical form.

31. The logic of Claim 28, wherein the logic is further operable to:

25 transmit the data signals to the serdes, the data signals comprising a plurality of electrical signals; and

receive a plurality of outgoing data signals from the serdes, the outgoing data signals comprising a plurality of electrical signals.

32. The logic of Claim 28, wherein the logic is further operable to hot-plug a high speed coupler of the coupled interface converter paddle to the serdes.

5 33. The logic of Claim 28, wherein the logic is further operable to adjust a speed of the data signals to a generic speed.

34. The logic of Claim 28, wherein the logic is further operable to:
determine the identified communication protocol using a board surface
controller; and
10 transmit an instruction from the board surface controller to the serdes to process the data signals according to the identified communication protocol.

35. The logic of Claim 28, wherein the logic is further operable to indicate a status of the data signals.
15

36. The logic of Claim 28, wherein the logic is further operable to transmit the data signals to a line card, the serdes disposed outwardly from the line card.

37. A system for converting data signals, comprising:

5 means for determining whether a coupled interface converter paddle coupled to a serdes comprises a first interface converter paddle or a second interface converter paddle, the first interface converter paddle associated with a first communication protocol, the second interface converter paddle associated with a second communication protocol;

means for identifying the communication protocol associated with the coupled interface converter paddle;

10 means for receiving a plurality of data signals from the coupled interface converter paddle; and

means for deserializing the data signals according to the identified communication protocol.

38. A system for converting data signals, comprising:

a first interface converter paddle associated with a first communication protocol;

a second interface converter paddle associated with a second communication protocol;

a physical layer card operable to:

determine whether a coupled interface converter paddle coupled to the physical layer card comprises the first interface converter paddle or the second interface converter paddle;

identify the communication protocol associated with the coupled interface converter paddle;

receive a plurality of data signals from the coupled interface converter paddle, the data signals being serialized;

deserialize the data signals according to the identified communication protocol;

adjust a speed of the data signals to a generic speed;

transmit the data signals to a line card, the physical layer card disposed outwardly from the line card;

receive a plurality of outgoing data signals from the line card; and

serialize the outgoing data signals according to the identified communication protocol; and

a status indicator operable to indicate a status of the data signals, the coupled interface converter paddle comprising a transceiver operable to:

transform the data signals from an optical form to an electrical form;

transmit the data signals to the physical layer card;

receive a plurality of outgoing data signals from the physical layer card; and

transform the outgoing data signals from an electrical form to an optical form, the line card comprising a board surface controller operable to:

determine the identified communication protocol; and

instruct the physical layer card to process the data signals according to the identified communication protocol.

39. A system for converting data signals, comprising:

a first interface converter paddle associated with a first communication protocol;

a second interface converter paddle associated with a second communication protocol;

a physical layer card operable to:

determine whether a coupled interface converter paddle coupled to the physical layer card comprises the first interface converter paddle or the second interface converter paddle;

identify the communication protocol associated with the coupled interface converter paddle;

receive a plurality of first data signals from the coupled interface converter paddle, the data signals being serialized;

deserialize the first data signals according to the identified communication protocol; and

transmit the first data signals to a line card coupled to the physical layer card; and

a third interface converter paddle associated with a third communication protocol and operable to:

receive a plurality of second data signals;

deserialize the second data signals according to the third communication protocol; and

transmit the second data signals to the line card, the line card coupled to the third interface converter paddle.

40. The system of Claim 39, wherein the physical layer card is operable to:

receive a plurality of outgoing data signals from the line card; and

serialize the outgoing data signals according to the identified communication protocol.

41. The system of Claim 39, wherein the coupled interface converter paddle comprises a transceiver operable to:

transform the first data signals from an optical form to an electrical form;

transmit the first data signals to the physical layer card;

5 receive a plurality of outgoing data signals from the physical layer card; and

transform the outgoing data signals from an electrical form to an optical form.

42. The system of Claim 39, wherein the coupled interface converter paddle comprises a transceiver operable to:

10 transmit the first data signals to the serdes, the first data signals comprising a plurality of electrical signals; and

receive a plurality of outgoing data signals from the serdes, the outgoing data signals comprising a plurality of electrical signals.

43. The system of Claim 39, wherein the coupled interface converter paddle comprises a high speed coupler operable to be hot-plugged to the serdes.

44. The system of Claim 39, wherein the third interface converter paddle comprises a transceiver operable to:

20 transform the second data signals from an optical form to an electrical form;

transmit the second data signals to the physical layer card;

receive a plurality of outgoing data signals from the physical layer card; and

transform the outgoing data signals from an electrical form to an optical form.

45. The system of Claim 39, wherein the third interface converter paddle comprises a transceiver operable to:

25 transmit the second data signals to the serdes, the second data signals comprising a plurality of electrical signals; and

30 receive a plurality of outgoing data signals from the serdes, the outgoing data signals comprising a plurality of electrical signals.

46. The system of Claim 39, wherein the third interface converter paddle comprises a high speed coupler operable to be hot-plugged to the serdes.